

REMARKS

Claims 7-17 have been examined. New claims 18 and 19 have been added to more fully claim the patentable aspects of the invention.

I. Formal Matters

Applicants thank the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119, and receipt of a certified copy of the priority document.

Applicants also thank the Examiner for considering the references cited with the Information Disclosure Statement filed October 21, 2005. The Examiner, however, crossed out the JP 2002-530040 reference listed on form PTO/SB/08 A & B filed on October 21, 2005. Applicants respectfully request the Examiner to initial the appropriate boxes on form PTO/SB/08 A & B indicating that all of the cited reference have been considered.

With respect to the Information Disclosure Statement filed on October 21, 2005, the JP 2002-530040 reference was submitted along with a corresponding PCT English abstract (WO 00/27023) serving as a concise explanation of relevance for JP 2002-530040. On January 16, 2007, the Examiner acknowledged during a telephone conversation that the requirements under 37 C.F.R. §§ 1.97 and 1.98 were in fact met and that the reference should have been considered.

Therefore, Applicants respectfully request the Examiner to initial the form. For Examiner's convenience, a copy of form PTO/SB/08 A & B as filed with the USPTO on October 21, 2005 is enclosed.

II. Rejection under 35 U.S.C. § 103(a)

Claims 7-17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 5,920,162 to Hanson et al. ("Hanson") in view of U.S. Application Publication No. 2003/0030409 to Kusumoto et al. ("Kusumoto"). Applicants traverse these rejections.

A. Claim 7

Claim 7 recites a control device wherein an engine is started and power generation is performed, wherein "a field current limit value Ifgi in the inverter-mode power generation and a field current limit Ifga in the alternator-mode power generation are set differently from each other, and the larger value is set as the value Ifg", which the Examiner alleges is disclosed by Kusumoto. Applicants respectfully disagree. In particular, the Examiner alleges that Figures 2 and 5 of Kusumoto disclose setting the larger value as the value Ifg. Figures 2 and 5 merely show a field current in a start mode, a field current in an inverter generation mode and a field current in normal generation mode. Furthermore, Kusumoto merely discloses a field current control means 5 to control a field current (paragraph 21, lines 11-14). Therefore, Figures 2 and 5 of Kusumoto at best discloses a field current limit value in the start mode, a field current limit value in the inverter generation mode and a field current limit in the normal generation mode, the field current being controlled by the field current control means. Figures 2 and 5 do not, however, show both a field current limit value Ifgi and a field current limit value Ifga in the inverter generation mode or in the normal generation mode (i.e., within the same mode) and setting the larger value of Ifgi and Ifga values as the value Ifg.

For example, in the exemplary embodiment of the present application, the field current limit value I_{fga} in the inverter-mode power generation is indicated by the dotted line in Figure 10. A person of ordinary skill would understand that the inverter-mode is provided with both I_{fgi} and I_{fga} values, and that in Figure 2 of the exemplary embodiment of the present invention, since I_{fgi} is the larger value, I_{fgi} is shown as the value set as the value I_{fg} . Similarly, in the alternator-mode of Figure 2, I_{fga} is shown as the value set as the value I_{fg} , since value I_{fga} is larger than value I_{fgi} . Therefore, Kusumoto fails to teach or suggest a field current limit value I_{fgi} in the inverter-mode power generation and a field current limit I_{fga} in the alternator-mode power generation are set differently from each other, and the larger value is set as the value I_{fg} , as required by claim 7.

Applicants respectfully submit that claim 7 is patentable for at least the above reasons. Furthermore, Applicants submit that Hanson, alone or in combination with Kusumoto, does not correct the deficiencies of Kusumoto.

B. Claim 8

Since claim 8 depends upon claim 7, Applicants submit that claim 8 is patentable at least by virtue of its dependency.

In addition, claim 8 recites that “wherein in the alternator-mode power generation, the field current limit value I_{fga} is set to be equal to or larger than the field current limit value I_{fgi} , and the field current limit value I_{fga} in the alternator-mode power generation is set as the field current limit value I_{fg} in the power generation.” Figure 2 of Kusumoto, cited by the Examiner, merely shows a field current in a start mode, an inverter generation mode and a normal

generation mode. Figure 2, however, does not show that within the alternator-mode, the field current limit value I_{fga} is set to be equal to or larger than the field current limit value I_{fgi} , and therefore, the field current limit value I_{fga} is set as the field current limit value I_{fg} . Therefore, Kusumoto fails to teach or suggest the above features as required by claim 8.

Applicants respectfully submit that claim 8 is patentable for at least the above reasons. Furthermore, Applicants submit that Hanson, alone or in combination with Kusumoto, does not correct the deficiencies of Kusumoto.

C. Claim 9

Since claim 9 depends upon claim 7, Applicants submit that claim 9 is patentable at least by virtue of its dependency.

In addition, claim 9 recites that “wherein in the inverter-mode power generation, the field current limit value I_{fgi} is set to be equal to or larger than the field current limit value I_{fga} , and the field current limit value I_{fgi} in the inverter-mode power generation is set as the field current limit value I_{fg} in the power generation.” Figure 2 of Kusumoto, cited by the Examiner, merely shows a field current in a start mode, an inverter generation mode and a normal generation mode. Figure 2 does not, however, show that within the inverter-mode, the field current limit value I_{fgi} is set to be equal to or larger than the field current limit value I_{fga} , and therefore, the field current limit value I_{fgi} is set as the field current limit value I_{fg} . Therefore, Kusumoto fails to teach or suggest the above features as required by claim 9.

Applicants respectfully submit that claim 9 is patentable for at least the above reasons. Furthermore, Applicants submit that Hanson, alone or in combination with Kusumoto, does not correct the deficiencies of Kusumoto.

D. Claim 10

Since claim 10 depends upon claim 7, Applicants submit that claim 10 is patentable at least by virtue of its dependency.

E. Claim 11

Since claim 11 depends upon claim 7, Applicants submit that claim 11 is patentable at least by virtue of its dependency.

In addition, claim 11 recites that “the low rotation speed zone for boosting includes a zone where boosting is not carried out at the time of low load, and a field current in this case is equal to or larger than the field current limit value I_{fga} in the inverter-mode power generation”, which the Examiner alleges is disclosed by Kusumoto. Applicants respectfully disagree. Figure 5 of Kusumoto, cited by the Examiner, merely shows that the field current is returned to a normal current value during the period from t_{53} to t_{54} and at t_{55} , the field current comes to a state of the inverter generation mode (paragraph 36, lines 2-7). Furthermore, Kusumoto merely discloses supplying compensation current to the armature coil when in the inverter generation mode control state (paragraph 24, lines 11-21). Kusumoto, however, does not disclose including in a low rotation zone for boosting a zone where boosting is not carried out at the time of low load, and a field current in this case is equal to or larger than the field current limit value I_{fga} in

the inverter-mode power generation. Therefore, Kusumoto fails to teach or suggest the above features as required by claim 11.

Applicants respectfully submit that claim 11 is patentable for at least the above reasons. Furthermore, Applicants submit that Hanson, alone or in combination with Kusumoto, does not correct the deficiencies of Kusumoto.

F. Claim 12

Since claim 12 depends upon claim 7, Applicants submit that claim 12 is patentable at least by virtue of its dependency.

G. Claims 13 and 14

Since claims 13 and 14 depend upon claim 8, Applicants submit that claims 13 and 14 are patentable at least by virtue of their dependencies.

H. Claim 15

Since claim 15 depends upon claim 9, Applicants submit that claim 15 is patentable at least by virtue of its dependency.

I. Claim 16

Since claim 16 depends upon claim 9, Applicants submit that claim 16 is patentable at least by virtue of its dependency.

Furthermore, since claim 16 contains features that are similar to the features discussed above in conjunction with claim 11, and since the Examiner has not alleged that the combination

of the Hanson and Kusumoto suggest such features, Applicants submit that claim 16 is patentable for analogous reasons.

J. Claim 17

Since claim 17 depends upon claim 9, Applicants submit that claim 17 is patentable at least by virtue of its dependency.

III. New Claims

In order to provide more varied protection, Applicant adds claims 18 and 19, which are patentable at least by virtue of their dependency on claim 7.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/554,100

Attorney docket Q90098

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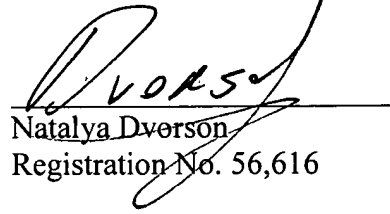
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